
U. S. Department of Energy Federal Technical Capability Panel

Annual Report to the Secretary of Energy on the Status of Federal Technical Capability Related to the Safe Operation of Defense Nuclear Facilities



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**FEDERAL TECHNICAL CAPABILITY PANEL
ANNUAL REPORT ON THE STATUS OF FEDERAL TECHNICAL CAPABILITY
RELATED TO THE SAFE OPERATIONS OF DEFENSE NUCLEAR FACILITIES**

INTRODUCTION

The Department of Energy's (DOE) Federal Technical Capability Program (FTCP) was established in response to the Defense Nuclear Facilities Safety Board's (DNFSB) Recommendation 93-3. The FTCP represents a significant effort aimed at improving the Department's overall technical capability. The Deputy Secretary established a Federal Technical Capability Panel (Panel) to oversee the implementation of the FTCP. The Panel consists of senior line managers who have been designated as Agents to represent Headquarters and Field Offices with defense nuclear facility responsibilities. The Panel is also responsible for submitting an annual report to the Secretary of Energy that summarizes the actions taken to ensure that organizations maintain the critical technical capabilities that must be preserved to ensure safe operations at defense nuclear facilities.

This is the second Annual Report issued by the Panel. This report covers the period from January 1, 1999, to May 31, 2000, and summarizes the status of the technical capability program in the Department. It identifies accomplishments, issues, and provides recommendations as appropriate.

**STATUS OF CRITICAL TECHNICAL CAPABILITIES AND STAFFING RELATED TO
SAFE OPERATIONS OF DEFENSE NUCLEAR FACILITIES**

A workforce analysis and staffing plan are maintained by organizations with defense nuclear facilities safety responsibility. The analyses identify critical technical skills that must be maintained to assure safe operations of those facilities. Existing shortages and plans to deal with the shortages in the near-term are also identified. The analyses are being used as part of the strategy to insure that the Department has the critical technical skills necessary to carry out its missions, and as a basis for recruitment and development programs.

As of January 1, 2000, there was a total of 879 positions identified as critical technical capabilities across the Department. Of those 879 positions, 110 were identified as vacant at the time of the analyses. The Albuquerque Operations Office identified the largest number of critical technical capabilities at 299. Defense Programs reported the largest number of vacancies at 32. The organizations that identified vacancies also identified actions to fill those vacancies over time. Since January, these actions have resulted in 54 of these positions being filled or addressed through other means, such as reassignment of existing personnel, or redistribution of critical technical responsibilities.

Attachment One provides a summary of the results of the workforce analyses and resulting identification of critical technical capabilities for safe operations of defense nuclear facilities.

ACCOMPLISHMENTS RELATED TO IMPROVING TECHNICAL CAPABILITY

The Accomplishments described below were based upon Action Items from the Panel's FY 2000 Annual Plan, which was prepared based upon recommendations approved by the Secretary in the Panels FY 2000 Annual Report to the Secretary.

1. The Panel aggressively pursued the reestablishment of the Technical Leadership Development Program (TLDP).

The Panel approved the Program Guidance and an Implementation Manual, both developed by a complex-wide working group, necessary for the reestablishment of the TLDP. The Office of Human Resources Management subsequently initiated the corporate recruitment efforts necessary to identify outstanding candidates for a TLDP Class. Panel Agents identified the number of TLDP positions their organizations required for the class that will come on board in June of 2000. Selections were made by participating offices and 10 Interns have been hired, to date, for the first class of the reestablished TLDP.

2. The Panel initiated an independent assessment of the FTCP's implementation and effectiveness.

The assessment was conducted by a team comprised of Department of Energy Senior Technical Safety Managers, an independent senior consultant, and a senior technical manager from another Federal agency. The results of the assessment were used as a basis for several of the recommendations in this report.

3. The Panel began development of an integrated workforce plan to preserve critical technical capabilities at closure sites.

Maintaining critical technical capabilities at closure sites is essential to ensure that the sites can be closed safely and efficiently. Preliminary meetings were held with the Office of Environmental Management (EM). EM is preparing a white paper that will identify technical needs and address how they might be met. Some may be met through the use of existing administrative flexibilities; others may require special initiatives such as legislative authority. EM is working with Human Resource professionals at EM closure sites and the Panel in identifying its closure needs and developing remedies.

4. Institutionalization of the Federal Technical Capability Program continues.

The FTCP Manual (DOE M 426.1-1) was developed by the Panel and approved through the Department's Directives process. The Manual describes the programs and processes necessary to recruit, deploy, develop, and retain the technically competent workforce necessary to accomplish the Department's missions in a safe and efficient manner. The Manual supports requirements established in DOE P 426.1, FEDERAL TECHNICAL CAPABILITY POLICY FOR DEFENSE NUCLEAR FACILITIES and DOE O 360.1A, FEDERAL EMPLOYEE TRAINING.

5. Expansion of the current Federal Technical Capability Program.

A FTCP Expansion Plan was developed and approved by the Panel. The initial phase of the Expansion Plan will be a pilot project involving two offices that currently do not participate in the FTCP, one Headquarters and one Field Element. Discussions are underway with interested offices. A Panel Agent will work with the volunteer offices on developing and instituting specific activities leading to the implementation of the FTCP in these offices. The Panel will, based on the pilot project, evaluate the feasibility and effectiveness of expanding the FTCP and will make a recommendation regarding continuation of expansion efforts to other organizations at the end of the 3rd quarter FY2001.

6. Closure of 93-3 Implementation Plan.

In June 1999 the DNFSB requested that the Department bring the Implementation Plan to closure by the end of the fiscal year. The DNFSB requested the Department provide them a report by September 30, 1999, on the status of completing the commitments in the 93-3 Implementation Plan, the rationale for closing Recommendation 93-3 and the Department's plan for continuing the Federal Technical Capability Program. This report was provided on October 13, 1999. On November 9, 1999, the DNFSB closed Recommendation 93-3.

ISSUES RELATED TO IMPROVING TECHNICAL CAPABILITY

Phase II Assessments of the Technical Qualification Program (TQP) were completed in September 1999 by all affected Offices. The results of these assessments and the independent FTCP assessment conducted by the Panel indicate that additional work is required at several offices to fully implement the TQP. The Panel will closely follow the progress being made in this area, however, this will take a significant effort on the part of the affected offices to ensure that the programs are effectively implemented.

Changing missions at the various sites continue to challenge the ability of managers to ensure that they have the necessary technical resources. Mission changes range from new mission areas to site closure. As site missions change, so must the skill mix of employees at that site. Additionally, as sites move toward closure, managers will struggle to retain those highly competent technical employees who will be concerned with future employment issues. All offices will be required to monitor and update their staffing plans to ensure those existing vacancies are filled quickly and potential candidates are identified for anticipated vacancies.

The Department has reestablished the TLDP. There are a number of significant issues that must be resolved to ensure the continuation of this vital technical intern program. These include a continued source of funding, better recruiting to obtain more recent college graduates, allocation of FTEs, protection of interns during downsizing, and overall program management. The Panel will continue its oversight of the TLDP. Senior management support of this program, however, is required to ensure its success.

An independent assessment of the overall FTCP was completed as part of the FY 2000 Annual Plan. This included all aspects of the FTCP that are designed to determine critical technical needs of the

defense nuclear facilities, the processes for recruiting and hiring the best qualified candidates, the TQP and retention of technical personnel.

A team under the direction of Mr. Bill Spader, Savannah River Operations Office, conducted the assessment and presented its findings to the Panel. The assessment report included both recognition of the strengths of the Program and recommendations for improvements. Specific recommendations included:

- Further development and use of the TLDP to attract technical graduates to the Department.
- Measures to improve the qualification process under the TQP.
- Improved use of Performance Plans and Agreements and Individual Development Plans for Senior Technical Safety Managers and TQP participants to support continuous improvement and succession planning.
- An integration of Departmental resources to address technical personnel issues and needs with particular emphasis on closure sites, critical staffing needs, budgetary constraints, and expansion of the TLDP.

ATTACHMENT ONE

Critical Technical Capabilities Profile for Defense Nuclear Facilities

RECOMMENDATIONS TO MAINTAIN OR IMPROVE TECHNICAL CAPABILITY

1. The Department should strongly support the reestablishment of the corporate TLDP, and its institutionalization through commitments to funding and recruitment for classes on an annual basis.
2. The Department should finalize and implement an integrated workforce plan to preserve critical technical capabilities at closure sites as soon as possible. The plan should address the transition of workers as missions are transferred or completed.
3. The Department should reinforce the necessity of using the critical technical capability staffing plans as a basis for meeting the needs of the organization. The staffing plans should include a succession planning element to ensure that critical positions, particularly at the senior level, can be readily filled. They should also be used as a basis for recruiting, hiring, and implementing development plans.
4. It is paramount that the Technical Qualification Program and Senior Technical Safety Manager Programs maintain credibility with sufficient rigor, discipline, and realistic schedules to make them challenging and worthwhile. Specific attention must be paid to provide the qualifying officials consistent and realistic expectations for the administration of qualification and the granting of “equivalencies,” “exemptions,” and “waivers” to the personnel qualification requirements. Senior managers including Assistant Secretaries, Deputy Assistant Secretaries and Office Managers in the Headquarters offices, and Operations Office Managers, and Assistant Managers in the field, must get actively involved and be drivers for the implementation of these programs.
5. The “aging” of the DOE technical workforce, with a very limited number of entry-level personnel, is affecting the DOE Complex today and could soon severely affect the DOE technical skill-mix. There is an urgent need to actively pursue all avenues and innovations to expand the inflow of entry-level technical personnel to ensure that a technically capable workforce continues into the future consistent with DOE missions.
6. The Department should move vigorously to implement recommendations arising from the Independent Assessment Report of the Federal Technical Capability Program.

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Critical Technical Capabilities Profile for Defense Nuclear Facilities

Office	Critical Technical Capabilities	Vacancies as of 12/99	Comments
Defense Programs	88	32	DP has hired several new employees and expects to fill the rest of these positions through reallocation of FY 2000 funds. Outside recruitment, in a manner to include the widest possible audience, will be used to obtain necessary skills that are not currently available within DP. DP will work to obtain the most diverse, qualified pool of candidates possible. DP has had recent success attracting qualified applicants from industry, the laboratories, plants, the military, and other Federal agencies. DP will make use of the Department's excepted service authorities to fill these positions, as appropriate.
Environment, Safety and Health	0	0	EH does not have any "critical positions" as defined by the criteria issued by the Panel. The EH mission differs from other program offices and field elements that have direct responsibility for safety and mission accomplishment at defense nuclear facilities. EH has determined that they have sufficient principal and backup personnel with technical capabilities needed to perform the safety functions of the office.
Environmental Management	17	0	EM has restructured into a site-focused organization with cross-cutting functions matrixed to support the site lead concept, and has strengthened its safety and health and project management roles. EM has determined that positions fitting "critical" were those positions that could direct the Field or provide some level of decision making authority. These positions are the EM Assistant Secretary and/or Principal Deputy Assistant Secretary (PDAS), the EM DAS's and/or Associate DAS's for Integration and Disposition, Site Closure, Project Completion, and Science and Technology; Office Directors who have direct responsibility for Field sites (Waste Isolation Pilot Plant, Ohio, Oak Ridge, Rocky Flats, Small Sites Closure, Idaho, Savannah River, Richland, and River Protection); and the Directors for Safety, Health, and Security, Nuclear Material and Spent Fuel, and Transportation.
Albuquerque	299	27	The two categories with the largest numbers of vacancies are facility representative and authorization basis review. AL is requesting additional budgetary resources from DP to cover expenses associated with deployment/redeployment of technical staff to LAAO, where AL's top priority vacancies exist. AL will continue to recruit to fill vacancies to the full extent permitted by budget and staffing limitations. In addition, AL has dissolved an AL Safety Division (Safety Analysis and Support Division) and re-deployed 5 critical technical staff to field offices (Los Alamos and Kirtland) and transferred 3 unencumbered FTE to the Amarillo Area Office. AL is also actively pursuing the redeployment of technical staff from AL and DP to AL area offices under the DP restructuring initiative. Toward this end, AL has conducted a job fair in Albuquerque and participated in a DP job fair to promote movement of technical staff to DP field offices.
Idaho	36	1	Technical skill shortages will be resolved by reassignment and long-term training of ID employees. Selective external recruitment will be used for positions that cannot be filled by internal reassignments. Idaho anticipates shortages in the following technical areas based on retirements and other form

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			of attrition over the next three years: FY00- Facility Representatives, Fire Protection Engineer; FY01- Facility Representatives, SME-Nuclear Criticality Safety Engineer; FY02-Facility Representatives, SME's-Nuclear Safety Engineer, Health Physics, Industrial Hygiene.
Nevada	25	0	NVO currently has no critical shortages in its technical capability/position requirements. Nevada does not project surpluses in critical technical capabilities/positions over the next three years, nor can it accurately project shortages in these areas, except for a Test Controller position. They are using a Career Development Program, the Technical Capability Development Program, Succession Planning, and the TLDP to ensure technical capability is maintained.
Oak Ridge	148	10	The vacancies reside within the Senior Technical Safety Manager and Facility Representative categories. ORO does not anticipate difficulties in filling these vacancies from within DOE. The positions reflected in this entry will be reviewed further to determine if there is an advantage in focusing on more-critical positions within the larger (i.e., 148) group in future reports.
Oakland	33	1	OAK does not anticipate shortages in critical technical positions over the next three years due to retirements. The potential for attrition due to losses to the private sector or contractors remains. They have been successful in ensuring the retention of critical technical capabilities by using TQP and Facility Representative training, retention allowances, and the Excepted Service authorities.
Ohio	23	0	Ohio currently has no critical shortages in its technical capability/position requirements and no surpluses in critical technical/ position requirements are projected for the next three years. A prioritized focus has been placed on the retention of critical technical skills using features of the Ohio Technical Qualification Program and the Employee Transition Plan. Ohio plans to use administrative flexibilities along with cross training and collateral assignments to offset losses due to attrition.
Richland	80	6	RL critical technical needs should be fairly stable over the next 3 years. RL projects no shortages or surpluses, or losses of key technical personnel, other than those identified in its Workforce Analysis. Where critical needs exist and the incumbent is vulnerable, RL will continue succession planning and the use of intern programs to grow strong technical replacements.
Ofc of River Protection	29	23	The EM hiring freeze stopped the process of filling these critical needs. The lack of dedicated ORP HR support delayed the process of hiring through this freeze and is expected to delay hiring now that the freeze has been lifted. The lack of these critical positions and the ability to hire key personnel has highly compromised the organization's ability to accomplish its mission.
Rocky Flats	33	0	RF will continue to define required capabilities and pursue authorities to address their skill mix concerns through closure.
Savannah River	68	10	SR employs a defense-in-depth strategy to assure that more than the minimum required personnel are qualified at all times to ensure no disruptions to

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			operations. Even though SR has no obvious current or projected skill gaps predicated by retirement eligibility, there are a few one-of-a-kind positions where unanticipated attrition may result in skill gaps. With careful workforce management and succession planning, SR should be able to develop and maintain the needed workforce skills for the next five years. Critical hiring needed to develop sufficient defense-in-depth capabilities in criticality safety, materials control and accountability, natural phenomena, and tritium is currently underway.
TOTAL	879	110	